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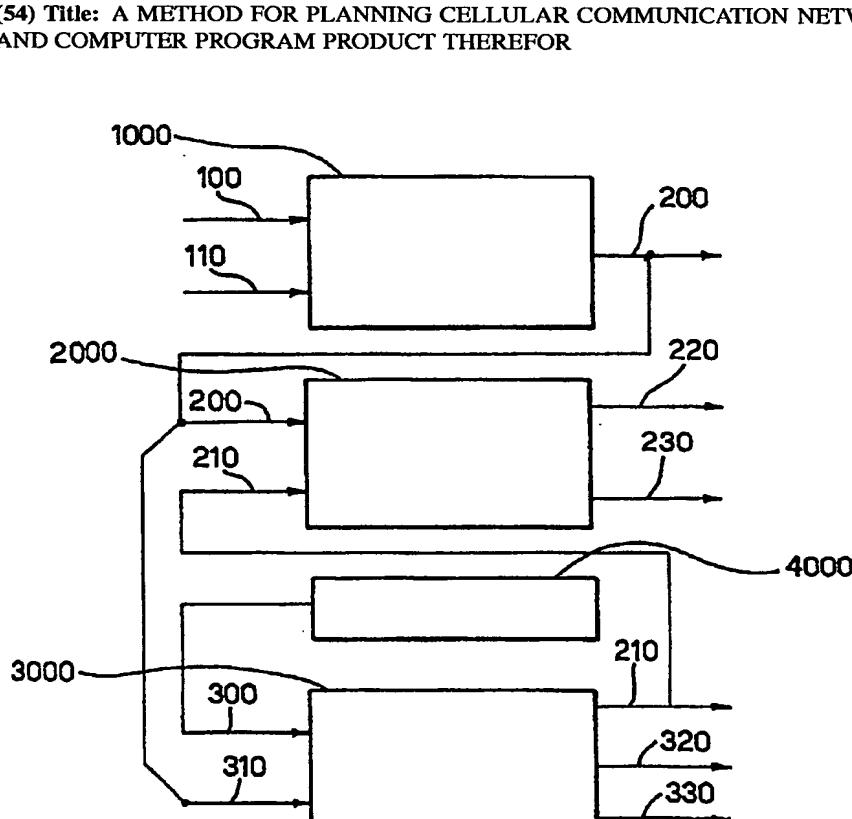
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communication network.

(57) Abstract: In a method of planning cellular communication networks, at least one cost function indicative of the quality of service (QoS) rendered by the network is defined which takes onto account the quality of service of location-based services rendered by said network. That cost function is preferably based on the concept of dilution of precision (DOP) and is indicative of the quality of service (QoS) of voice services, data services and location based services jointly. A system (4000) is provided for measuring at least one actual network parameter. The measurements provided by the measurement system are compared with the corresponding parameters as planned with the purpose of locating (220) at least one critical point in the network where inadequate quality of service is being provided. Information items indicative of counter measures to be carried out in the network in order to dispense with at least one critical point are provided. The cost function may be optimised by using as input data the location of at least one base station in the cellular

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